red taillights by determining that the "red" pixel is greater than a threshold and greater than a number of multiples of the intensity sensed by the "red complement" pixel adjacent thereto. Likewise, a white light source indicative of oncoming headlights could be detected by determining that both the "red" pixel and the "red complement" pixel adjacent thereto are both above a particular threshold and within a particular intensity range of each other. It may also be desirable to select bands that fall between primary spectrum regions or any other bands that may be desirable for a particular application. --

cont'd B1

IN THE CLAIMS:

Please amend claims 54, 68, 69, 71-74, 77-79, 82, 84-86, 89, 91, 92 and 94-97 as follows:

54. (Amended) A control system for automatically controlling the state of the headlamps of a controlled vehicle, said control system comprising:

an optical system for imaging external sources of light within a predetermined field of view; and

an imaging processing system for processing images from said optical system and providing a control signal for controlling the state of the headlamps as a function of the output of pixels imaging the same spectral band of light.

B2

68. (Amended) The control system as recited in Claim 54, wherein said image processing system includes at least two photosensor arrays, and wherein said optical system comprises at least two lenses, one of said at least two lenses being configured to image onto one of said at least two photosensor arrays, and the other of said at least two lenses being configured to image onto the other of said at least two photosensor arrays.

sub C2

B3

69. (Amended) The control system as recited in Claim 68, further including means for filtering the light through said at least two lenses such that one of said at least two lenses filters light below a first predetermined wavelength and another of said at least two lenses filters light above a second predetermined wavelength.

71. (Amended) The control system as recited in Claim 69, wherein one of said at least two lenses transmits light having a wavelength longer than 600 nm defining a red filter for imaging taillights on one of said at least two photosensor arrays.

B4

72. (Amended) The control system as recited in Claim 71, wherein tail lamps are detected by comparing the relative output of at least one pixel imaged through the red filter with the output of a selected group of neighboring pixels and indicating a taillight detection when the output of said at least one pixel imaged through the red filter is a predetermined percentage higher than the pixel output of said selected group of neighboring pixels.

73. (Amended) The control system as recited in Claim 71, wherein the other of said at least two lenses transmits light having a wavelength shorter than 600 nm defining a cyan filter for imaging headlamps on the other of said at least two photosensor arrays.

74. (Amended) The control system as recited in Claim 73, wherein headlamps are detected by comparing the relative output of at least one pixel imaged through the cyan filter with the output of a selected group of pixels and indicating a headlamp when the output of said at least one pixel imaged through the cyan filter is a predetermined percentage higher than the output of said selected group of pixels.

77. (Amended) The control system as recited in Claim 76, wherein said image processing system includes means for detecting taillights in each frame.

B5

78. (Amended) The control system as recited in Claim 77, wherein said image processing system includes a dim counter, which is incremented, whenever a frame is processed which contains at least one taillight or headlamp.

79. (Amended) The control system as recited in Claim 78, wherein said dim counter is reset whenever a frame containing no headlamps or taillights is processed.

B6

82. (Amended) The control system as recited in Claim 81, wherein said undim counter is reset when a headlamp or taillight is detected in a frame.

84. (Amended) The control system as recited in Claim 54, wherein said control signal is used to turn the high beam headlamps completely on or completely off.

B7

85. (Amended) The control system as recited in Claim 54, wherein said control signal is used to continuously vary the brightness level of said high beam headlamps between completely on and completely off.

86. (Amended) The control system as recited in Claim 85, wherein said control signal is used to vary the duty cycle of said headlamps.

89. (Amended) A control system for automatically controlling the state of the headlamps of a controlled vehicle, the control system comprising:

an optical system for imaging external sources of light within a predetermined field of view, the optical system including at least two photosensor arrays and at least two lenses, each of said at least two lenses being configured to image said predetermined field of view onto a respective one of said at least two photosensor arrays; and

B8

an image processing system for processing images from said optical system and providing a control signal for controlling the headlamps as a function of the relative output of the pixels imaging said external sources of light.

91. (Amended) The control system as recited in Claim 89, further including means for filtering the light through said at least two lenses.

B9

92. (Amended) The control system as recited in Claim 91, wherein said filtering means includes a filter dye for said at least two lenses.

B10

94. (Amended) A control system for automatically controlling the high beam state of the headlamps of a controlled vehicle comprising:

an optical system for imaging external sources of light within a predetermined field of view onto an image sensor containing a plurality of pixels, said optical system configured to